U.S. DEPARTMENT OF ENERGY | Savannah River Operations Office

Savannah River Site Overview

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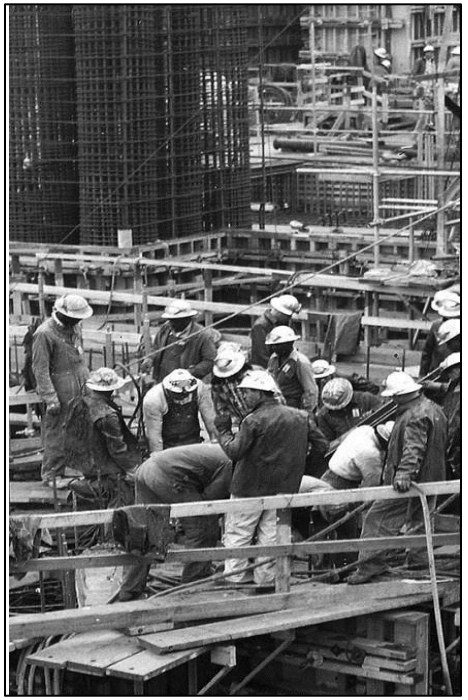
Serving our Nation Over Six Decades Strong

- ✓ Providing over 6 decades of knowledge, technology and solutions to tackle pressing national needs
- ✓ Pioneering development and deployment of nuclear technologies at scales never before imagined
- ✓ Standing as core of our Nation's nuclear deterrent
- ✓ Achieving significant cleanup and risk reduction milestones
- ✓ Protecting workers, public and environment
- ✓ Maintaining record as one of safest industrial complexes in world (top 5%)



Early Production Years

Produce and recover nuclear materials

- Tritium
- Pu-238
- Pu-239
- Special Isotopes
- Uranium Recovery

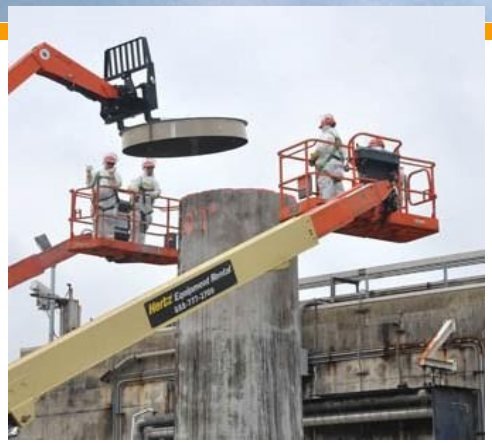
Early Years

- Five reactors
  - Two chemical separations plants
  - Heavy water extraction plant
  - Nuclear fuel and target fabrication facility
  - Waste management facilities
  - Laboratory/Analytical facilities
- Produced 36 metric tons of Plutonium (Pu) from 1953 to1988

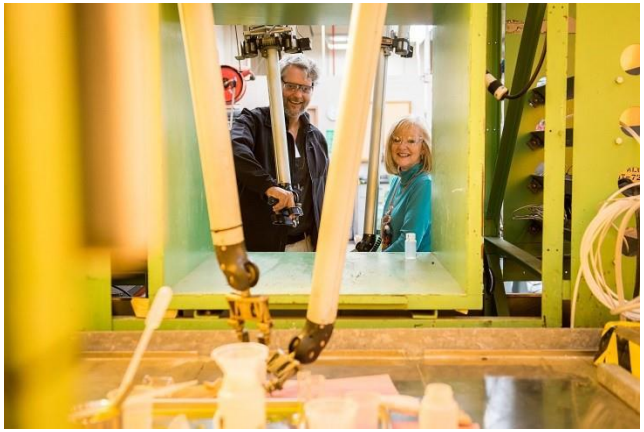
Cold War ending meant a completely different philosophy and approach to the nuclear arsenal.

Sustaining Missions Vital to Our Nation

- Lead **Environmental Management** priorities to safely and efficiently clean up the environmental legacy, reduce risk and protect our people, neighbors and environment
- Team with **National Nuclear Security Administration (NNSA)** to enable national defense capabilities
- Apply **Savannah River National Laboratory (SRNL) science and engineering to provide high-value, cost-effective solutions** for environmental cleanup, nuclear security and clean energy challenges



Today's Work for Neighbors and Nation



Environmental Management

Management, stabilization and disposition of nuclear materials

Management and disposition of solid, liquid and transuranic wastes

Spent fuel management

Excess facility demolition

Environmental remediation

National Nuclear Security Administration

Tritium operations and extraction

Recovering Helium-3

Nonproliferation support

Mixed Oxide Fuel Fabrication Facility

Uranium blending and shipping

Foreign fuel receipts

SRS Team: Partners in Progress

Workforce
4th Qtr. FY2016

- Federal = 436
- EM Contractors = 6,496
- NNSA Contractors = 3,692
- Other = 655
- *Total Workforce = 11,279*

Federal Agencies

- DOE Savannah River Operations Office (DOE-SR)
- National Nuclear Security Administration (NNSA)
  - Savannah River Field Office
  - Office of Material Management & Minimization
  - Office of Acquisition and Project Management
- DOE Office of Inspector General (OIG)
- U.S. Forest Service (USFS)

Contractors

- Savannah River Nuclear Solutions (SRNS)
  - Management & Operations
  - Savannah River National Laboratory (SRNL)
- Savannah River Remediation (SRR)
  - Liquid Waste Operations
- Parsons (Salt Waste Processing Facility)
- Ameresco (Biomass Cogeneration Plant)
- Centerra-SRS (Security)
- Chicago Bridge & Iron (CB&I) AREVA
  - Mixed Oxide Fuel Fabrication Facility (MOX)
- University of Georgia -- Savannah River Ecology Laboratory (SREL)
- Other: Support Service, Limited Service, Agency Partners, Grad Students, etc.

Existing EM Major Prime Contracts

- **Savannah River Nuclear Solutions (Management & Operating)**
  - Awarded FY08; 5-year base; Options up to 5 years
  - Base award worth $4 Billion; options up to $5.4 Billion
- **Savannah River Remediation (Liquid Waste)**
  - Awarded FY09
  - Six Year base award worth $3.3 Billion
  - 2 Year option worth $726 Million
- **Parsons (Salt Waste Processing Facility)**
  - Present value $1.8 Billion
- **Centerra (Paramilitary Security Services)**
  - Awarded FY09
  - $989 Million over 10 years
- **AMERESCO (Energy Savings Performance Contract)**
  - Awarded FY09
  - Valued at $945 Million
  - Privately funded construction and operation of biomass cogeneration power plant
  - Energy savings over a 21 year period pay for plant construction

Safety and Security are #1 Priority

FY16: Advancing Environmental Cleanup

- ✓ Closed Tank 12 - eighth high-level waste tank closure at SRS
- ✓ Completed Salt Waste Processing Facility construction and began testing/commissioning
- ✓ Kept Saltstone Disposal Unit (SDU) 6 facility readiness on track to begin receiving waste in FY17

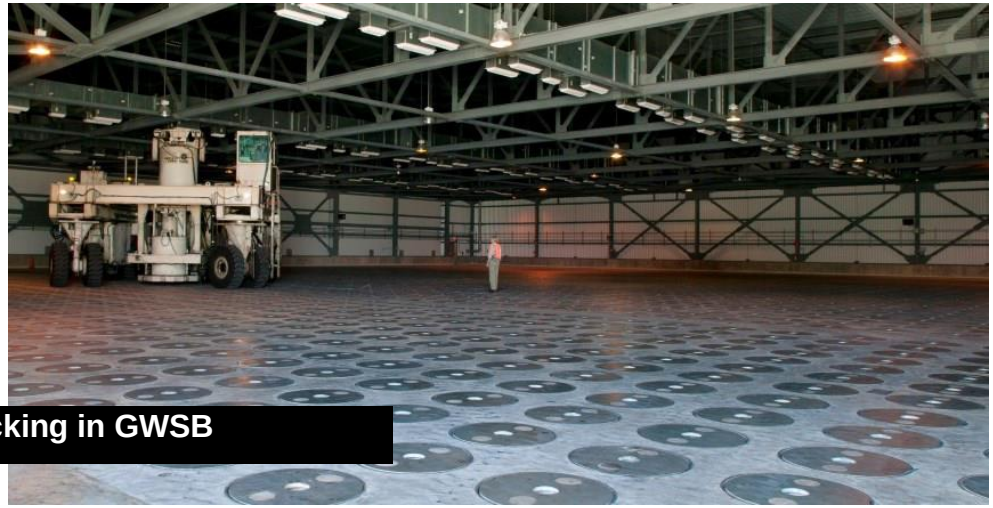

Tank 12 Closure (April 2016)


Mega-Vault SDU6


Salt Waste Processing Facility Construction Complete (April 2016)

FY16: Advancing Environmental Cleanup

- ✓ Celebrated 20 years of successful operations at the Defense Waste Processing Facility (DWPF)
- ✓ Produced 133 canisters of vitrified high-level waste at DWPF in FY16 - 4,106 to date
- ✓ Completed modifications at Glass Waste Storage Building and began canister double-stacking in August



Canister Double-Stacking in GWSB

FY16: Keeping Capabilities Strong in Nuclear Materials Management

- ✓ H Canyon: processed spent nuclear fuel
- ✓ HB-Line: produced plutonium oxide suitable for disposition *(funded by NNSA)*
- ✓ K Area: Began packaging operations for non-MOXable plutonium disposition
- ✓ L Area: Managed shipments of spent nuclear fuel from foreign and domestic research reactors
- ✓ Moving forward with deactivation and decommissioning at Building 235-F, former Plutonium Fuel Form Facility

Spent Fuel storage in L Basin

SRNL: *Increasing Independence, Enhanced Relationships*

- Following recommendations of DOE reports and Energy Secretary's priorities, Savannah River National Lab is becoming a separate business unit.
- Transition began Oct. 1, to be complete by April 2017
- Funding continues under M&O contract, remains the same through end of contract in 2018
- About 150 employees move from SRNS to SRNL

Goals:

- Enhance strategic relationship with DOE
- Improve ability to be nimble, responsive and efficient
- Expand science and energy capabilities to solve national and global challenges

SRS EM FY17 Budget Request Overview

Savannah River Site EM Budget ($Millions) *By Program Baseline Summary (PBS)*	FY 2015 Enacted	FY 2016 Current	FY 2017 President Request	DELTA FY16 vs FY17
PBS 11C Nuclear Materials	*260*	*255*		
PBS 12 Used Nuclear Fuel	*24*	*41*		
PBS 13 Solid Waste	48	52		
PBS 30 Soil & Groundwater Remediation	66	66		
SRS Risk Management Operations	398	414		
PBS 11C NM Stabilization & Disposition[1] (NEW)	*284*	*296*	311	15
Nuclear Material Management (NEW)			311	15
PBS 41 S&M, Risk Reduction & Deactivation[2] (NEW)	*0*	*0*	28	28
PBS 13 Solid Waste	*48*	*52*	51	(1)
PBS 30 Soil & Groundwater Remediation	*66*	*66*	74	8
Environmental Cleanup (NEW)			153	35
PBS 14C Radioactive Liquid Tank Waste	547	555	645	90
PBS 14C Saltstone Disposal Unit #6	30	35	7	(28)
PBS 14C Saltstone Disposal Unit #7	0	0	10	10
PBS 14C Salt Waste Processing Facility	135	194	160	(34)
Radioactive Liquid Tank Waste Stabilization and Disposition	712	784	822	38
PBS 202 General Plant Projects[3] (NEW)			17	17
PBS 100 Community & Regulatory Support	11	11	11	0
PBS 20 Safeguards & Security	138	128	134	6
SRS EM Programs Budget Authority	**1,259**	**1,337**	**1,448**	**111**

[1] PBS 11C and PBS 12 have been combined into one PBS (11C)
[2] New PBS 41 to include scope for 235-F deactivation and F-Canyon S&M
[3] New PBS 202 to include scope for infrastructure improvements and General Plant Projects

Looking Ahead: *FY17 EM Budget Request Supports Key SRS Missions and Collaborations*

- ✓ Produce 100+ canisters of vitrified high-level waste at Defense Waste Processing Facility
- ✓ Continue toward commissioning the Salt Waste Processing Facility
- ✓ Down-blend DOE Environmental Management-plutonium at K-Area for future disposal at Waste Isolation Pilot Plant in Carlsbad, New Mexico
- ✓ Continue processing spent (used) nuclear fuel in H-Canyon
- ✓ Continue receipts of Foreign and Domestic Research Reactor spent nuclear fuel in L-Area
- ✓ Invest in site-wide general purpose infrastructure improvements
- ✓ Invest in expanding influence and innovation of Savannah River National Laboratory
- ✓ Recruit and train next generation workforce of SRS
- ✓ Continue open communications and building positive working relationships with SRS stakeholders

Across SRS: *Support Prioritized Infrastructure Improvements*

SRS Infrastructure Snapshot

11,000 Workforce

WATER

2 Million Gallons/day

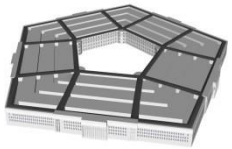
Domestic

1500 Fire Hydrants

58 Miles of piping

Sanitary Waste

8 Million Square Feet of Facility Space

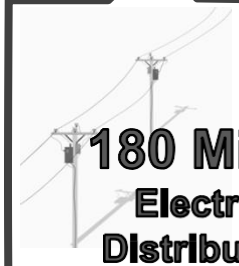


More than the Pentagon!

310 sq miles of land area

Larger than the DC Beltway

33 Miles RR Track

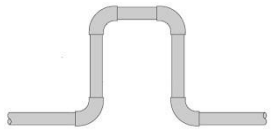


180 Miles Electric Distribution

119 MILES PAVED ROADS

37 Million Gallons RAD Waste in 44 Tanks

20 Miles Steam Lines



Across SRS: *Recruit Future Nuclear Workforce*

- Scientists
  - Physicists, Chemists, Biotech, Environmental, Ceramists
- Engineers
  - Mechanical, Nuclear, Civil, Critical Safety, Process
- Operators
- Technicians
- Industrial hygienists
- Statisticians
- Machinists
- Glass Blowers
- RadCon Inspectors

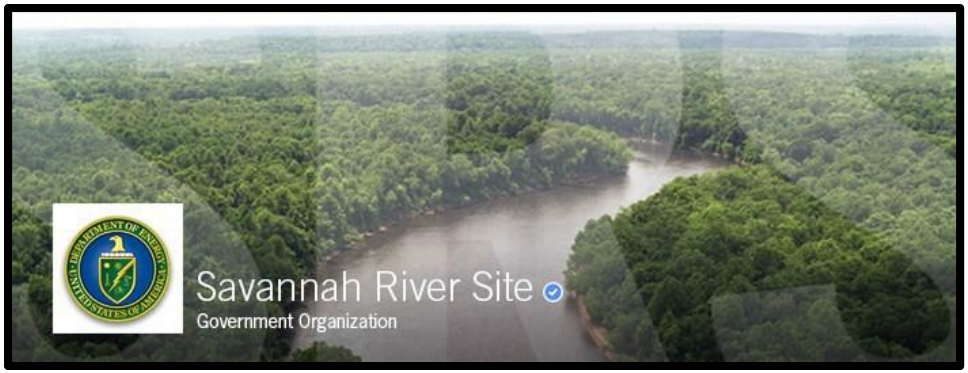
Outlook of Sustained SRS Success

- Maintain strong safety and security culture
- Continue risk reduction progress and meet regulatory commitments
- Maintain key nuclear materials management capabilities
- Expand influence and innovation of SRNL
- Support prioritized infrastructure improvements
- Recruit next generation workforce and future leadership

✓ ***Possibilities, Practice, People***

Building on a legacy that Sets SRS Apart

Stay Informed on Savannah River Site



Website:
http://sro.srs.gov

Facebook:
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YouTube:
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